

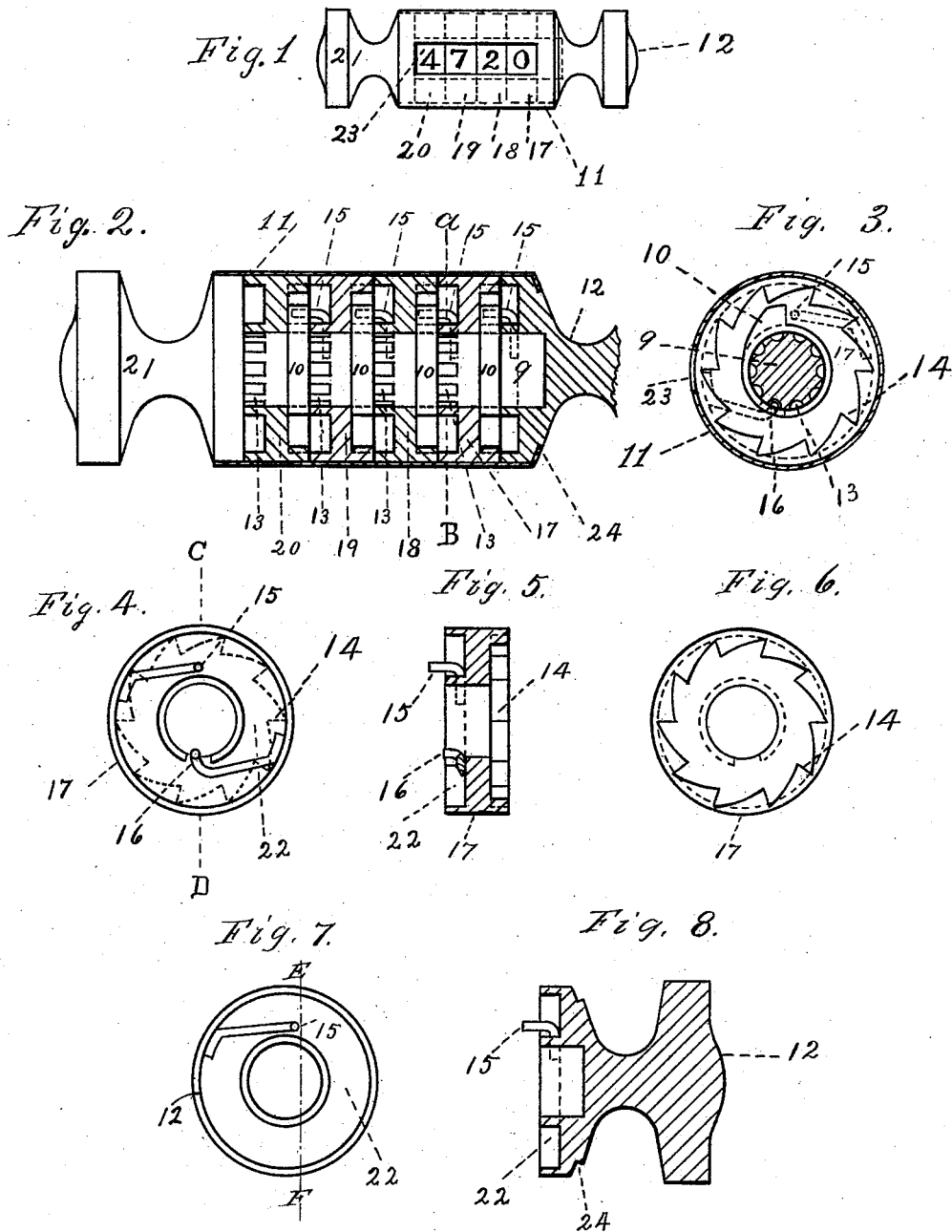
(No Model.)

W. F. LAMB.

CASH REGISTER.

No. 381,561.

Patented Apr. 24, 1888.



WITNESSES:

William S. Bliz.
C. A. Mander.

INVENTOR.

INVENTOR.
Watson F. Lamb.
BY W. G. Richards.

ATTORNEY.

UNITED STATES PATENT OFFICE.

WATSON F. LAMB, OF NEW YORK, N. Y.

CASH-REGISTER.

SPECIFICATION forming part of Letters Patent No. 381,561, dated April 24, 1888.

Application filed November 18, 1887. Serial No. 255,478. (No model.)

To all whom it may concern:

Be it known that I, WATSON F. LAMB, a citizen of the United States, residing at New York, in the county and State of New York, have
5 invented a new and useful Registering-Instrument, of which the following is a specification.

My object is to provide a pocket-instrument on which may be registered receipts or disbursements of cash from one penny upward.

10 I attain the object of my invention by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a view of the instrument in working order, approximately full size, all other views being exaggerated. Fig. 2 is a section of shield 11, number-wheels 17, 18, 19, and 20, and thumb piece 12, but showing a side elevation of central spindle, 9, enlarged at 21 to form a handle, and cams 10; also spring-pawls 15 are partially shown. Fig. 3 is a transverse section on line *a b*, (see Fig. 2,) showing one of the cams 10 and number-wheel 18 in position. The spring-pawl 15 and dog 16 of number-wheel 18 are shown in dotted lines. Fig. 4 is a view of inner side on side toward handle 21 of the number-wheel 17. (See Figs. 1 and 2.) Fig. 5 is a section of said wheel 17 on line *o d*. (See Fig. 4.) Fig. 6 is a view of reverse side of said wheel 17, showing the ratchet-teeth 14. Fig. 7 is a view of the inner end of the thumb-piece 12. (See Figs. 1 and 2.) Fig. 8 is a section of the thumb piece 12 on line *E F*. (See Fig. 7.)

Similar numbers refer to similar parts throughout.

In this instrument a series of wheels, 17, 18, 19, and 20, each having upon its periphery a series of numbers from 0 to 9, inclusive, are mounted upon a central spindle, 9, (see Fig. 2,) one end of which is enlarged to form a handle, 21. A series of recesses, 13, in the surface of the spindle 9, and a cam, 10, secured rigidly thereto, are provided for each number-wheel that may be used, there being one recess 13 in each series for each number upon the periphery of the wheel directly over it. A cylindrical shield, 11, having a longitudinal slot, 23, (see Figs. 1 and 3,) through which, as wheels 17, 18, 19, and 20 are revolved, the numbers upon their peripheries may be seen, is secured rigidly to spindle 9 at the enlarged end, (see Fig. 2,) inclosing number-wheels 17,

18, 19, and 20. Said number-wheels are provided with pawls and ratchets, to be hereinafter described.

Upon the outer end of the spindle 9, or the end opposite the handle 21, a thumb-piece, 12, (see Figs. 1, 2, 7, and 8,) having the same outline as handle 21, is placed, and secured by flanging the shield 11 inwardly and into an annular rabbet, 24, (see Figs. 2 and 8,) in the thumb-piece 12, which is free to revolve upon the spindle 9, and has a recess, 22, in its inner end, (see Figs. 2, 7, and 8,) in which is secured a spring-pawl, 15, the free end of which forms a right angle and projects from recess 22, for a purpose hereinafter described. The number-wheel 17 (see Figs. 1, 2, 4, and 5) has a similar recess, 22, in its inner side, or side toward the handle 21, in which is secured a spring-pawl, 15, like that in the thumb-piece 12; also a dog, 16. It has also in its outer side, on side next to the thumb-piece 12, a recess, (see Figs. 2, 5, and 6,) the periphery of which is formed into ratchet-teeth 14, there being one tooth for each number upon the periphery of the wheel, which, when the wheel 17 is in position on the spindle 9, are directly over one of the cams 10, (see Figs. 2 and 3,) the points of the teeth 14 nearly touching the cam 10 as wheel 17 is revolved.

The number-wheels 18, 19, and 20 are exact duplicates of the wheel 17, except that wheel 20 has no pawl 15.

The number-wheels 17, 18, 19, and 20 being in position on the spindle 9, each with its internal ratchet, 14, over its respective cam 10, (see Fig. 2,) the thumb-piece 12 is secured on the spindle 9 with its spring-pawl 15 projecting inwardly between the ratchet 14 of the number-wheel 17 and its respective cam 10, (see Figs. 2 and 8,) while dog 16 in the inner side of the wheel 17 enters one of the recesses 13 in the spindle 9, and the spring-pawl 15 of the wheel 17 projects between the ratchet-teeth 14 and the cam 10 of the number-wheel 18. This arrangement of ratchet 14, spring-pawl 15, dog 16, cam 10, and recesses 13 is carried through the series of number-wheels 17, 18, 19, and 20.

As the thumb-piece 12 is revolved, its spring-pawl 15 is raised by the cam 10, causing it to engage with the teeth of the ratchet 14 in the number-wheel 17, and carry said wheel for-

ward until the spring-pawl 15 in the thumb-piece 12 passes over the cam 10 and falls to its normal position, (see Figs. 2, 3, 7, and 8,) thereby releasing the number-wheel 17. At the same time the dog 16 in the number-wheel 17 falls into one of the recesses 13 (see Fig. 3) in the spindle 9, which retains the wheel 17 in such a position that one of the numbers on its periphery appears beneath the slot 23 in the shield 11. Starting from zero with number 0 appearing on each number-wheel 17, 18, 19, and 20 beneath the slot 23 in the shield 11, (see Fig. 1,) nine revolutions of the thumb-piece 12 brings number 9 into view on the wheel 17. At the tenth revolution of the thumb-piece 12 the spring-pawl 15 in the inner side of the wheel 17 is raised by the cam 10 under the number-wheel 18, and engaging with the ratchet-teeth 14 of the wheel 18, whereby wheels 17 and 18 move forward until number 0 appears on the number-wheel 17 and number 1 on the wheel 18, the number-wheels 17 and 18 being then released. Ten more revolutions of the thumb-piece 12 brings number 0 again into view on wheel 17 and number 2 on wheel 18.

From the preceding description it will be seen that any number whatever may be registered, limited only by the number of wheels employed, with their respective cams, pawls, and ratchets.

The recesses 13 in the spindle 9 are of such form that the dog 16 in any number-wheel may be forced out when the spring-pawl 15 of the thumb-piece 12, or of any number-wheel preceding it, engages with its ratchet-teeth 14.

The foregoing describes a registering-instrument simple and of such construction and dimensions that it can be carried in a person's pocket, serving the useful purpose of keeping an account of money paid out in small sums or of money received.

Registering-instruments have been constructed heretofore. I do not therefore claim, broadly, a series of number-wheels operated by pawls and cams; but

What I do claim as my invention, and desire to secure by Letters Patent, is—

1. In a pocket cash-register, the combination of a series of wheels, 17, 18, 19, and 20, having numbers upon their peripheries, provided with suitable pawls and ratchets for operating the retaining-pawls 16, and the central spindle, 9, provided with a cam, 10, and a series of recesses, 13, for each number-wheel

17, 18, 19, and 20, and enlarged at one end to form an end support for number-wheel 20, and also a seat or bearing for an inclosing cylindrical shield, substantially as described.

2. In a pocket cash-register, the combination of a series of number-wheels, 17, 18, 19, and 20, provided with pawls and ratchets for operating the retaining-pawls 16, a central spindle, 9, carrying cams 10, recesses 13, and enlarged at one end to form a handle, 21, and the revolving thumb-piece or handle 12, of the same form as the handle 21, mounted upon the opposite end of the spindle 9, provided with an annular rabbet, 24, and carrying within a recess, 22, a spring-pawl, 15, as described, and for purposes set forth.

3. The combination, in a cash-register, of a series of number-wheels, 17, 18, 19, and 20, provided with spring-pawls 15 and internal ratchets, 14, the spindle 9, the thumb-piece 12, having an annular rabbet, 24, and the slotted inclosing-shield 11, flanged inwardly and into said annular rabbet 24 in thumb-piece 12, substantially as described.

4. In a pocket cash-register, the combination of spindle 9, provided with a cam, 10, and a series of recesses, 13, for each number-wheel 17, 18, 19, and 20, the slotted shield 11, secured rigidly thereto, the thumb-piece 12, provided with spring-pawl 15, and a series of number-wheels, 17, 18, 19, and 20, each having upon its periphery a series of numbers from 0 to 9, inclusive, and provided with an annular recess in one side, the periphery of which is formed into ratchet-teeth 14, the annular recess 22 in the opposite side, in which is secured a spring-pawl, 15, and dog 16, substantially as shown and described.

5. In a pocket cash-register constructed substantially as described, the series of cams 10, pawls 15, retaining-pawls 16, a series of number-wheels, 17, 18, 19, and 20, each having internal ratchet, 14, and a series of numbers upon its periphery, and a central spindle having a series of recesses, 13, for each number-wheel, said spindle being composed of the parts 9 and 12, the opposite ends of which are enlarged to form handles, the part 12 revolving upon part 9, whereby wheels 17, 18, 19, and 20 are operated as described, and for the purposes set forth.

WATSON F. LAMB.

Witnesses:

JOS. OATMAN,
S. M. BLAKELY.